

TICKLE-GRASS TUMBLERS

BY BYRON D. HALSTEAD

In the wagon paths through the unmowed fields, around Southern Pines, N. C., the brown tops of a grass (*Leptochloa mucronata* Michx.) have accumulated knee-deep, and therefore very noticeable to a wanderer in by-paths for health.

Each tip is composed of from twenty to forty very slender flexible awns, averaging six inches in length, arranged along the main axis. The awns of the basal portion of the head are much deflexed, those at the middle stand out at right angles to the axis, and the upper third of them extend upward, there being a terminal one, that is directly upright and is a counterpart of the main stem, that breaks off about four inches below the lowermost set of awns. This stem is held securely in place upon the plant by the three or four, usually four, leaf-sheaths, and from which, when mature, it is easily pulled. It is straw-colored and in sharp contrast with the other parts of the inflorescence, which are reddish, and when the feathery "ball" is in motion, is easily followed in its gyrations. This ball is about fifteen inches in diameter, of extreme lightness, and is able to remain at rest in almost any position. When the stem end is downward, the axis is usually inclined at nearly forty-five degrees from the perpendicular, due to the fact that the deflexed branches are not stiff, and usually two or three more or less bent ones are opposed to the stiff main stem in making the "feet" upon which the whole "plume" rests. When placed top down, the smooth, straw-colored stem may be perpendicular but is usually tilted somewhat sidewise, while three or more awns make the "tripod" upon which the "airy nothingness" is poised. Perhaps the most stable position is when the main axis is horizontal, about seven inches from the surface of support, and then four to seven legs, like "daddy long-legs," are in commission. In this position the whole ball can sway with the breeze in the direction of its main axis, thus bringing new "legs" into service.

By gathering the "tumblers" before they have become detached from the stalks, they can be carried in considerable

numbers, without interfering with one another. On the other hand it is quite puzzling to handle more than one, after they have become separated from their natural "handle," for, being much larger than a basket ball, one entangles with the others, and tends to make a very unmanageable feathery mass. Such giant unions are frequently met with in groves of small oak trees that border an open place, that has grown this grass as its chief crop. Driven by the wind to these "covers," sometimes the tumblers have accumulated to the depth of four or more feet, and with the upper surface nearly level and suggesting a fairy lake rather than a fairyland. Through such a "pond," far less substantial than feathers, one may pass dryshod, but the movements, that will be induced in the ghost-like surroundings, are not easily described. All the individual "balls" are bound together and yet capable of a wide range of motions.

The favorable places to find detached and independent "tumblers" is a wire fence of the square mesh sort, against which the "spider balls" are held by the prevailing winds.

When taken into the open, as upon a smooth cut lawn, and set loose before a gentle breeze, they start off on their fantastic journey. The direction, of course, in general is determined by the wind, but with a very gentle breeze there is much deviation seemingly dependent upon the way the axis of the ball is related to the line of the moving air. For example, when two tumblers are started in the same direction, they do not necessarily move in parallel lines as also they may not at equal rates of speed. On account of this apparent element of chance (that may be eliminated by proper training and study(?)) these tumblers may become subjects of considerable amusement, possibly leading to a mild form of satisfying the human inborn fondness for taking chances upon subjects that are in motion.

An excellent place for the study of the ways and rules of these grass "migrators" is the golf "green" which by the way, is a level square of bare smooth ground, with the central hole as the only break in the dead uniformity of the surface, and this is of no consequence, for the tumblers' "feet" are too many, and body too big, to be caught by so small a pitfall as a golf cup.

Now, let there be a gentle breeze, and by placing the feathery balls upon the windward side of the "green," the race is off, without scoring, unless the exact rate of speed is to be recorded, when a scratch line must be drawn, and the usual rules of the race course observed.

From the above the reader has gathered between the lines something of the lightness and airy texture of a subject that may engage the attention of a lover of plants when he is away from home and the weightier matters of life are purposely left behind.

While drinking in the balm of the long-leaved pine, with watch in hand one may test the speed of a pet tumbler, and in the excitement—and it will be thrilling at times—he may lose sight of the real meaning of the whole construction of the racer and the marvelous mechanism that serves the end of seed depression.

It is a lofty motherly instinct in plants, if you please, that has caught the attention, and while it provides amusement in this particular expression, yet, in the last analysis it serves to polish an old thought, namely, the debt to the species is final for the physical nature. But—

Upon the world of matter rests an atmosphere of thought
And in the upper reaches the Head-thinker's home is sought.
From facts to correlations, then these subtle laws combine—
'Tis called by many 'ologies, this lure of the Divine.

NEW BRUNSWICK, N. J.,
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MYOSURUS ARISTATUS BENTH.

BY IVAR TIDESTROM

In his catalogue of Geyer's plants* from the Upper Missouri, the Oregon Territory, and the intervening portion of the Rocky Mountains, Sir W. J. Hooker refers all the specimens of *Myosurus* collected on the trip to *Myosurus minimus* L.

On pages 458-459 of the volume cited,* a revision of *Myosurus* is made by Hooker, so far as the Geyer plants are concerned, and another species, *Myosurus aristatus* Benth. is added. Hooker states in part: "Mr. Bentham has kindly pointed out to me an

* London Journal of Botany, 6: 67, 1847.